

REMARKS

Applicants respectfully request reconsideration of this application in view of the foregoing amendments and following remarks.

A. Status of the Claims and Explanation of the Amendments

Claims 1 and 3-24 were previously pending in this application. Claims 1 and 3-24 have been rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over U.S. Patent No. 6,571,057 to Aoki (“Aoki”), in view of U.S. Patent No. 5,430,303 to Matsumoto (“Matsumoto”). Claims 1 and 3-24 are cancelled in this amendment rendering the rejections moot.

New claims 25-35 are added. Applicants respectfully submit that no new matter has been added in these newly added claims.

B. Applicants’ Newly Added Claims Are patentable Over the Combination of Aoki and Matsumoto

Applicants respectfully submit that the invention as set forth in the newly added claims 25-35 is patentably distinguishable from the cited references.

Aoki shows (i) a first container 10 in which a light source 20 for producing ultraviolet rays is place; (ii) a second container 21 in which an article w to be rinsed, which is placed therein, is going to be rinsed by ultraviolet rays; (iii) supplying means 55 for supplying a rinsing gas (oxygen) into the second container 21 during irradiation of ultraviolet rays; and (iv) exhausting means 56 for discharging the gas supplied into the second container 21.

Newly proposed Claim 25 clearly recites a system comprising “a second container disposed inside said first container” and “said second container having a clearance through the first container”. With this system, when a rinsing gas is supplied into the second container, the

rinsing gas can be discharged through this clearance to the first container. In addition to this, the inside pressure of the second container is made higher than the inside pressure of the first container, by means of the rinsing gas being supplied. With this arrangement, it is assured that the inside gas of the second container continuously flows toward the fist container. Hence, in accordance with the present invention, any contamination materials such as organic substance, for example, produced inside the first container are assuredly prevented from flowing into the second container. This effectively avoids re-adhesion of contaminants onto the lens or the like, having been rinsed in the second container. Disposing the second container inside the first container as recited in Claim 25 is very effective to easily accomplish this structure.

Newly proposed Claim 29 which depends from claim 25 further comprising “second gas supplying means configured to introduce a nitrogen gas into said second container, and exhausting means configured to exhaust a gas in said first container.” With the provision of the second gas supplying means, a nitrogen gas is supplied into the second container, in response to which the rinsing gas in the second container flows through the clearance into the first container. The rinsing gas flowing into the first container is finally discharged outwardly by the exhausting means. This structure is specifically very effective. As an article inside the second container is rinsed by irradiation with ultraviolet rays and activation with the rinsing gas, there are dangling bonds upon the surface of the article rinsed. This means that the article surface can be easily bonded with contaminants having been removed from the article surface and floating within the ambience. In consideration of this, the second supplying means supplies a nitrogen gas into the second container to move the rinsing gas, having been used for the rinsing, out of the second container. The nitrogen is bonded with dangling bonds, such that undesirable contamination of the article can be avoided effectively.

The rinsing gas used for the rinsing is discharged into the first container. Finally, the rinsing gas is discharged outwardly by the exhausting means, together with the contaminated gas in the first container that contains organic substance. This structure enables use of a single and common exhausting means, and ensures that the rinsing gas flows in one direction. Therefore, contamination of an article to be rinsed can be avoided very efficiently.

Aoki does not teach or suggest the subject matter of our claims. In particular, Aoki does not teach or even suggest any one of the features: (1) disposing a second container inside a first container, and providing the second container with a clearance being communicated with the first container; (2) maintaining the inside pressure of the second container higher than the inside pressure of the first container, when the rinsing gas is supplied into the second container; and (3) ensuring that the gas inside the second container stably flows toward the first container, to thereby prevent contaminants such as organic substance produced in the first container from flowing into the second container and being deposited on the surface of the article such as lens, just having been rinsed.

Matsumoto discloses use of an inner chamber where an article to be rinsed is placed, and this document teaches circulating a gas inside the chamber to remove impurities therein. However, like Aoki, Matsumoto does not teach or even suggest any one of the features: (1) providing a second container with a clearance being communicated with a first container; (2) maintaining the inside pressure of the second container higher than the inside pressure of the first container, when the rinsing gas is supplied into the second container; and (3) ensuring that the gas inside the second container stably flows toward the first container, to thereby prevent contaminants such as organic substance produced in the first container from flowing into the

second container and being deposited on the surface of the article such as lens, just having been rinsed.

In summary, neither Aoki nor Matsumoto teaches or suggests alone or in combination the present invention. Accordingly, the claims 25-35 are patentable over these cited references.

CONCLUSION

Based on the foregoing amendments and remarks, Applicants respectfully request reconsideration and withdrawal of the rejection of claims and allowance of this application.

AUTHORIZATION

The Commissioner is hereby authorized to charge any additional fees which may be required for consideration of this Amendment to Deposit Account No. , Order No. 1232-4819. A DUPLICATE OF THIS DOCUMENT IS ATTACHED.

In the event that an extension of time is required, or which may be required in addition to that requested in a petition for an extension of time, the Commissioner is requested to grant a petition for that extension of time which is required to make this response timely and is hereby authorized to charge any fee for such an extension of time or credit any overpayment for an extension of time to Deposit Account No. , Order No. 1232-4819. A DUPLICATE OF THIS SHEET IS ATTACHED.

Respectfully submitted,
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